

PREDICTED ENERGY ASSESSMENT

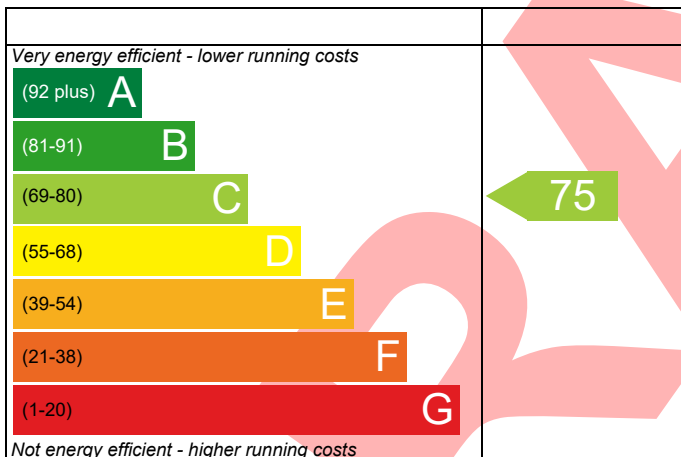
Plot D0-02, 2 Bed,
K, B, ES

Dwelling type: Flat, Semi-Detached
Date of assessment: 26/01/2021
Produced by: Mitchell Bennellick
Total floor area: 64.67 m²

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

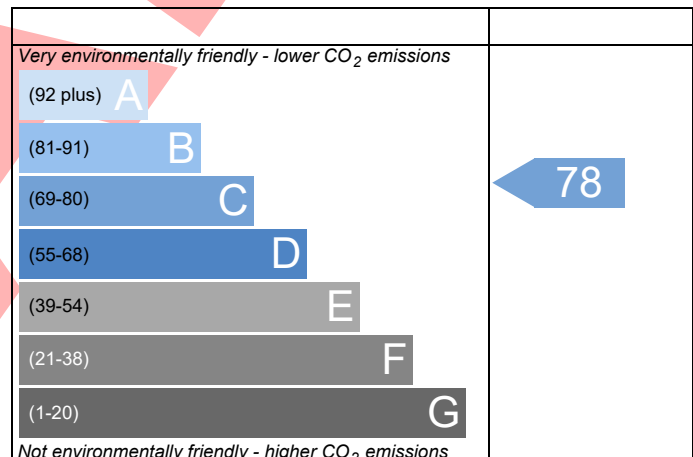
Energy Efficiency Rating



England EU Directive 2002/91/EC

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO₂) Rating



England EU Directive 2002/91/EC

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

This report has not been submitted through the Elmhurst Energy members' portal, therefore results are subject to change when the dwelling is completed.

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)



Property Reference	4907-0012-5077-108	Issued on Date	26/01/2021
Assessment Reference	108	Prop Type Ref	Ground Floor Flat
Property	Plot D0-02, 2 Bed, K, B, ES		

SAP Rating	75 C	DER	33.06	TER	29.43
Environmental	78 C	% DER<TER	-12.33		
CO ₂ Emissions (t/year)	1.73	DFEE	51.94	TREE	55.54
General Requirements Compliance	Fail	% DFEE<TFEE	6.47		

Assessor Details	Mr. Andrew McManus, Andrew McManus, Tel: 01455 883250, andrew.mcmanus@aessc.co.uk	Assessor ID	P635-0001
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Client	
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SUMMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TFE rate

1a TER and DER

Fuel for main heating	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	29.43	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	33.06	kgCO ₂ /m ²	
Excess emissions	3.63 (12.3%)	kgCO ₂ /m ²	Fail

1b TFE and DFEE

Target Fabric Energy Efficiency (TFEE)	55.54	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	51.94	kWh/m ² /yr	
	-3.6 (-6.5%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.15 (max. 0.30)	0.15 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.10 (max. 0.25)	0.10 (max. 0.70)	Pass
Openings	1.40 (max. 2.00)	1.40 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals	3.00 (design value)	m ³ /(h.m ²) @ 50 Pa	
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass

Limiting System Efficiencies

4 Heating efficiency

Main heating system	Room heaters with radiators or underfloor - Electric Panel, convector or radiant heaters	
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BUILDING REGULATION COMPLIANCE

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Secondary heating system

None

5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.40 kWh/day
Permitted by DBSCG 2.30

Pass

Primary pipework insulated

No primary pipework

6 Controls

Space heating controls

Programmer and appliance thermostats

Pass

Hot water controls

Cylinderstat

Pass

7 Low energy lights

Percentage of fixed lights with low-energy fittings

100 %

Minimum

75 %

Pass

8 Mechanical ventilation

Continuous supply and extract system

Specific fan power

0.44

Maximum

1.5

Pass

MVHR efficiency

91 %

Minimum

70 %

Pass

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (Severn Valley)

Slight

Pass

Based on:

Overshading

Average

Windows facing North

9.88 m², No overhang

Air change rate

2.00 ach

Blinds/curtains

None

Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type

U-value

Filled Cavity with Edge Sealing

0.00

W/m²K

Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals

3.00 (design value)

m³/(h.m²) @ 50 Pa

Maximum

10.0

m³/(h.m²) @ 50 Pa

Pass

10 Key features

Party wall U-value

0.00

W/m²K

Floor U-value

0.10

W/m²K

Air permeability

3.0

m³/m²h

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RECOMMENDATIONS

	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating			0	0	Not applicable
Photovoltaic			0	0	Not applicable
Wind turbine			0	0	Not applicable
Totals	£0	£0	C 75	C 78	

DRAFT

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